



# California Regional Water Quality Control Board

## Santa Ana Region



Alan C. Lloyd, Ph.D.  
Agency Secretary

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Arnold Schwarzenegger  
Governor

August 5, 2005

Base Realignment and Closure  
Attn: Mr. F. Andrew Piszkin, P.E.  
BRAC Environmental Coordinator  
7040 Trabuco Road  
Irvine, CA 92618

### COMMENTS ON DRAFT WORK PLAN, SOIL VAPOR EXTRACTION PILOT TEST AT IRP SITE 16, FORMER MARINE CORPS AIR STATION, EL TORO, GEOTRACKER GLOBAL ID DOD100168600

Dear Mr. Piszkin:

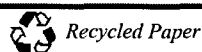
We have reviewed the above referenced document, dated May 2005, which we received on May 19, 2005. We have the following comments:

- **5.2 Vapor Extraction Well Installation Procedures**, fourth paragraph, Page 5-6:  
As you are aware, we have routinely recommended installation of 4-inch or 6-inch diameter casing for soil vapor extraction (SVE) wells, and a larger diameter boring to accommodate multiple well completions within the boring. A rule of thumb for properly constructed vapor wells (that are placed within a suitable type of soil) is a flow capacity of 125 to 150 standard cubic feet per minute (SCFM). In this section, you state that the proposed narrow (2-inch diameter) SVE wells will serve to limit the vapor flow in the SVE system. Therefore, it seems that the SVE well design was based on the 500 SCFM maximum flow rate of the available blower, instead of designing for maximum efficiency of vapor extraction.

One would expect that your experience with designs for other SVE systems, for both the Installation Restoration Program and the petroleum corrective action program at El Toro, would be the basis for your selection of vapor well diameter and boring diameter size for this pilot study. Please consider the available, past site-specific design experience in selecting the appropriate vapor well and boring diameters for application at Site 16. You can still use the proposed 500 SCFM blower to save initial capital costs, by controlling the number of operating individual vapor wells and have more efficient vapor wells. Our staff would be happy to assist you by sharing information on the use of this approach to operation of SVE systems at other facilities in our region.

Please note that the abbreviation SCFM used in this paragraph is not listed in the **Acronyms and Abbreviations**, Page iii.


*California Environmental Protection Agency*



- **Appendix A Sampling and Analysis Plan, Section 11.2.1 Electronic Data Deliverables (EDDs)**, Page 11-3: Please upload the available electronic data, as appropriate, into the State Board's Geotracker database. The global identification number for IRP Site 16 is DOD100168600.

For any questions, please call me at (951) 782-4494, or send email to [jbroderick@waterboards.ca.gov](mailto:jbroderick@waterboards.ca.gov).

Sincerely,

  
John Broderick  
SLIC/DoD Section

cc via email: Mr. Richard Muza, US EPA, Region 9  
Mr. Frank Cheng, DTSC, Office of Military Facilities  
Mr. Marc Smits, NAVFACENGCOM, Southwest Division

